The U.S. Labor Share, IPP-Adjusted: Annual and Quarterly Series (Regularly Updated)

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In this document, we show (and regularly update) the time series of the labor share at annual and quarterly frequencies for the United States. We use most updated BEA data to construct two series of the labor share under different assumptions about the treatment of Intellectual Property Products (IPP) income. First, we construct the labor share assuming that all IPP income (i.e investment) is capital income which is what the BEA currently assumes (as of November 29, 2022). Second, alternatively, we treat IPP income as ambiguous income as proposed in (Koh et al., 2020), which is equivalent to treat IPP investment as an intermediate expense—i.e. what the BEA assumed before it started to capitalize software in 1999 and R&D and artistic originals in 2013.

For completeness, we use several definitions of the labor share that vary by the amount of corrections done on the numerator and the denominator of the labor share. We summarize these labor share definitions in column (a) of Table 1. The first definition of the labor share is the so-called naïve measure of the labor share: LS0 $= \frac{\text{CE}}{\text{GDP}}$, where CE is the compensation of employees and GDP is gross domestic product. The second definition does a minimal correction and treats taxes and subsides (TS) as ambiguous income (i.e. not unambiguously allocated to capital or labor): LS1 $= \frac{\text{CE}}{\text{GDP-TS}}$. The third definition additionally treats proprietors' income (PI) as ambiguous: LS2 $= \frac{\text{CE}}{\text{GDP-TS-PI}}$. The fourth definition is treats only sales and excise taxes (SET) (within TS) as ambiguous income together with proprietors' income: LS2 $= \frac{\text{CE}}{\text{GDP-SET-PI}}$.[1] Finally, we also construct the labor share for the corporate sector (CLS1) and separately for the nonfinancial corporate sector (CLS2). Note that one of the advantages of the corporate labor share is that we do not have to worry about proprietor's income (or the government). In the corporate measures of the labor share we treat taxes and subsidies as ambiguous income—analogously to LS2. Finally, we adjust all these definitions of the labor share by IPP. Precisely, we treat IPP income as ambiguous income which implies that we additionally subtract IPP income from GDP in the denominator of the labor share as in Koh et al. (2020); see column (b) in Table 1. Note that since the labor share is ratio, we only use nominal variables in our calculations.

[1] This definition is detailed in Appendix D in Koh et al. (2020) and closely follows the business cycle literature in constructing the labor share (Cooley and Prescott, 1995; Ríos-Rull and Santaeulàlia-Llopis, 2010).

Table 1: Alternative Measures of the Labor Share: Annual and Quarterly

	(a) BEA Labor Share	(b) IPP-Adjusted Labor Share (Pre-1999 Accounting) (Koh et al., 2020)
▷ Aggregate Economy:		
	$\text{LS0} = \frac{\text{CE}}{\text{GDP}}$	$\text{LS0\_adj} = \frac{\text{CE}}{\text{GDP-IPP}}$
	$\text{LS1} = \frac{\text{CE}}{\text{GDP-TS}}$	$\text{LS1\_adj} = \frac{\text{CE}}{\text{GDP-TS-IPP}}$
	$\text{LS2} = \frac{\text{CE}}{\text{GDP-TS-PI}}$	$\text{LS2\_adj} = \frac{\text{CE}}{\text{GDP-TS-PI-IPP}}$
	$\text{LS3} = \frac{\text{CE}}{\text{GDP-SET-PI}}$	$\text{LS3\_adj} = \frac{\text{CE}}{\text{GDP-SET-PI-IPP}}$
▷ Corporate Sector:		
All	$\text{CLS1} = \frac{\text{CE}}{\text{GDP-TS}}$	$\text{CLS1\_adj} = \frac{\text{CE}}{\text{GDP-TS-IPP}}$
Nonfinancial	$\text{CLS2} = \frac{\text{CE}}{\text{GDP-TS}}$	$\text{CLS2\_adj} = \frac{\text{CE}}{\text{GDP-TS-IPP}}$

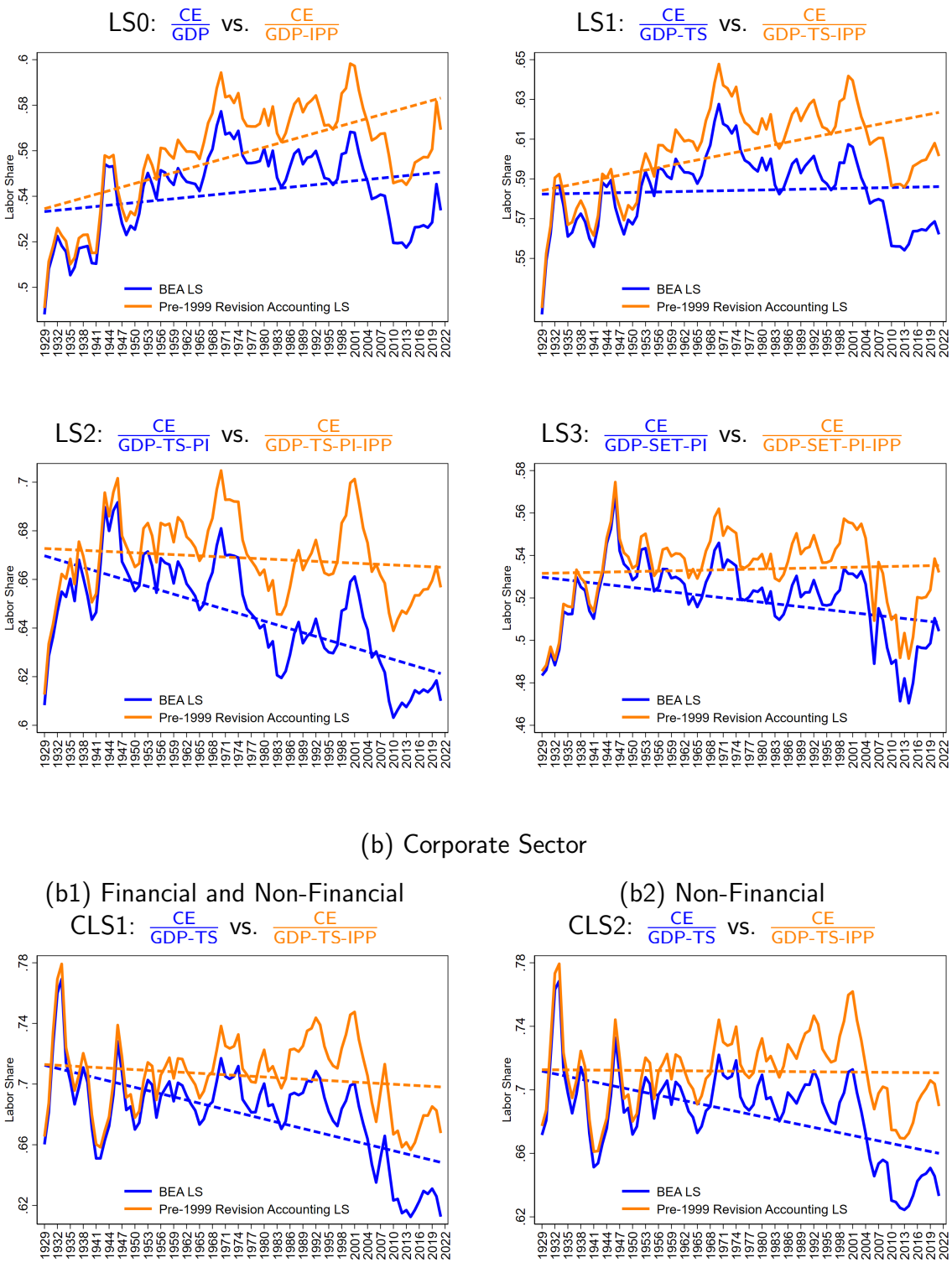
Notes: GDP is gross domestic product, CE is compensation of employees, TS is tax and subsides, SET is sales and excise taxes, PI is proprietors' income and IPP is intellectual property products investment. Our annual measure of the labor share is constructed starting in 1929 which is first available year of annual national income data in BEA (Koh et al., 2020). Our quarterly measure of the labor share is constructed starting in the first quarter of 1947 which is the first available quarter of national income data in the BEA (e.g. Koh and Santaeulàlia-Llopis, 2022).

Annual Labor Share In Figure 1, we show the behavior of the annual U.S. labor share for all definitions with and without IPP adjustments. Our annual measure of the labor share starts in the first available year of annual national income data in the BEA, 1929.

Quarterly Labor Share In Figure 2, we show the behavior of the quarterly U.S. labor share for all definitions with and without IPP adjustments. Our quarterly measure starts in 1947 when the first available quarter of national income data is available in the BEA.

Figure 1: U.S. Labor Share, Annual Series: 1929-2021

(a) Aggregate Economy



(b) Corporate Sector

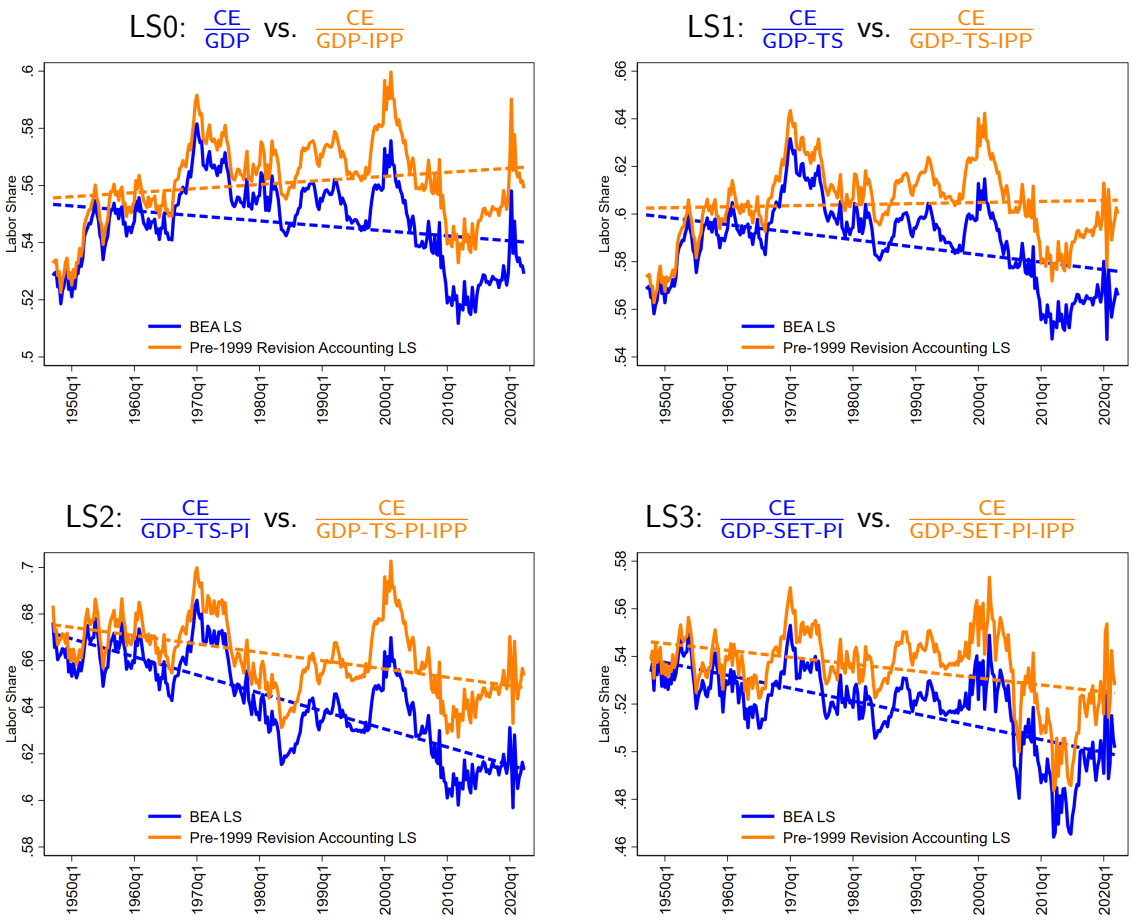
(b1) Financial and Non-Financial

(b2) Non-Financial

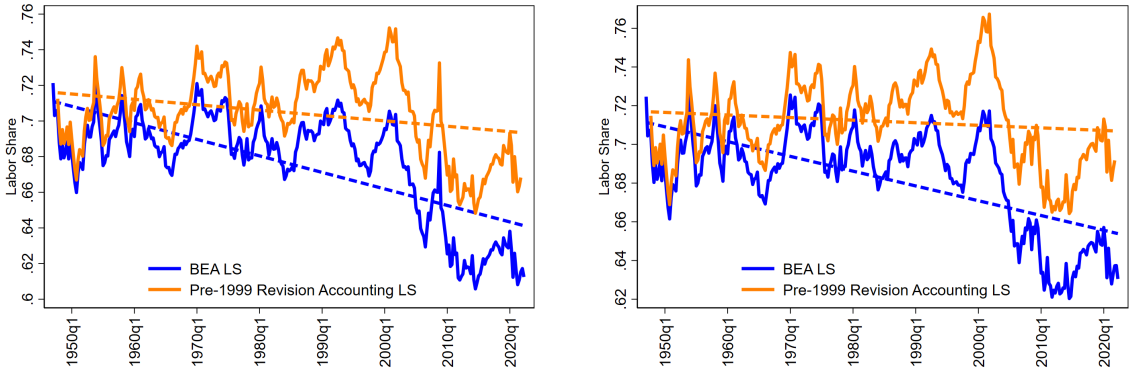
Notes: GDP is gross domestic product, CE is compensation of employees, TS is tax and subsides, SET is sales and excise taxes, PI is proprietors' income and IPP is intellectual property products investment. Our annual measure of the labor share is constructed starting in 1929 which is first available year of annual national income data in BEA.

Figure 2: U.S. Labor Share, Quarterly Series: 1947Q1-2022Q2

(a) Aggregate Economy



(b) Corporate Sector



Notes: GDP is gross domestic product, CE is compensation of employees, TS is tax and subsides, SET is sales and excise taxes, PI is proprietors' income and IPP is intellectual property products investment. Our quarterly measure of the labor share is constructed starting in the first quarter of 1947, as in the BEA.

References

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